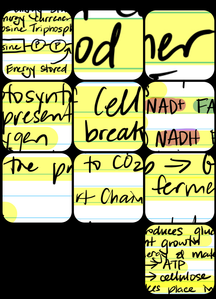
Summer Unit 2 study guide.pdf
PDF

use this study guide and make all of this into a test that can help me learn everything it's in questions and answers use all of the pages

#	Question
1	What is energy?
2	What is kinetic energy?
3	What is potential energy?
4	What is metabolism?
5	What is an enzyme?
6	What determines an enzyme's func

Unit 2 Test Que...

Here is a complete test in question-and-answer format based on your "Summer Unit 2" study guide. You can use this for review, self-testing, or flashcards. Let me know if you'd like it formatted for printing, quizzes, or flashcard apps like Anki. (^-)



Thanks for sharing the images! I've reviewed your handwritten notes and added the most important missing concepts to your test-style Q&A set. Here are additional questions and answers based on the content in your images:

🔋 ATP & Energy

Q: What is ATP and what does it stand for?
A: ATP stands for Adenosine Triphosphate and is the energy currency of the cell.

Q: Where is energy stored in the ATP molecule?
A: In the bonds between the phosphate groups, especially the third phosphate bond.

🌱 Autotrophs and Heterotrophs

Q: What is an autotroph?
A: An organism that makes its own food from inorganic materials.

Q: What is a heterotroph?
A: An organism that eats other organisms to get energy.

🌿 Photosynthesis & Cellular Respiration

Q: What two processes do plants perform?
A: Photosynthesis and cellular respiration.

Q: What does aerobic mean?
A: Oxygen is present.

Q: What does anaerobic mean?
A: No oxygen is present.

🔄 Cellular Respiration

Q: What are the three stages of cellular respiration?
A: Glycolysis, Citric Acid Cycle (Krebs), and Electron Transport Chain (ETC).

Q: What does glycolysis mean?
A: Breaking sugar.

Q: What are the starting materials for the Citric Acid Cycle?
A: Acetyl-CoA, NAD^+, FAD^+, ADP.

Q: What are the products of the Citric Acid Cycle?
A: CO_2, NADH, $FADH_2$, and ATP.

Q: Where do all electrons from previous stages go?
A: Into the Electron Transport Chain via NADH and $FADH_2$.

Q: What is oxidized to CO_2 during cellular respiration?
A: Glucose.

Q: Which stage of cellular respiration produces the most ATP?
A: The Electron Transport Chain (ETC).

🍷 Fermentation

Q: When does fermentation occur?
A: When no oxygen is available.

Q: What step is performed in fermentation?
A: Only glycolysis.

☀️ Photosynthesis

Q: What does photosynthesis produce that helps plants grow?
A: Glucose.

Q: What materials does photosynthesis provide?
A: Glucose for ATP production and cellulose for structure.

Q: Where does photosynthesis take place?
A: In the chloroplast.

Let me know if you'd like this combined with the previous test set or converted into printable flashcards or a quiz!

Great! Here's an extended test set including the new material from your uploaded notes on photosynthesis:

🟡 Photosynthesis: Light Reactions & Calvin Cycle

Q: What are the two stages of photosynthesis?
A: Light Reaction (Light-dependent) and the Calvin Cycle (Light-independent).

Q: What is the source of electrons in the light reaction?
A: H_2O (water).

Q: What gas is produced as a waste product during the light reaction?
A: O_2 (oxygen).

Q: What happens to electrons when they are excited by light?
A: They gain higher energy.

Q: What are the starting materials of the light reaction?
A: H_2O, ADP, and $NADP^+$.

Q: What are the products of the light reaction?
A: O_2 gas (waste), ATP, and NADPH.

Q: What is the function of the electron transport chain in the light reaction?
A: It captures high-energy electrons and uses them to make ATP via ATP synthase.

Q: What is the main function of the Calvin Cycle?
A: Sugar production (glucose synthesis).

Q: What energy molecules does the Calvin Cycle use from the light reaction?
A: ATP and NADPH.

🌵 Photosynthesis & Adaptation

Q: Why do plants use different types of photosynthesis?
A: To adapt to different environmental conditions.

Q: What challenges do plants face in hot and dry environments?
A: They lose water from leaves.

Q: How do some plants conserve water in dry environments?
A: They open stomata at night to reduce water loss.

Would you like all the flashcards and questions combined into a printable document, or split into different topics for easier studying (like ATP, Respiration, Photosynthesis, etc.)?